

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A process for the recovery of a catalyst in a reaction comprising boron trifluoride or its complex as the catalyst, the process comprising:

separating a reaction product and a reaction solvent after completion of the reaction,  
wherein the reaction solvent consists of a hydrofluorocarbon compound and/or an oxygenic hydrofluorocarbon compound .

Claim 2 (Previously Presented): The process for the recovery according to Claim 1, wherein the reaction solvent consists of a hydrofluorocarbon compound and/or an oxygenic hydrofluorocarbon compound with no ozone-depleting potential.

Claim 3 (Previously Presented): The process for the recovery according to Claim 1, wherein the reaction solvent consists of a hydrofluorocarbon compound having an ether linkage.

Claim 4 (Previously Presented): The process for the recovery according to Claim 1, wherein the reaction solvent consists of a hydrofluorocarbon compound and/or an oxygenic hydrofluorocarbon, and a fluorine compound with the specific gravity of 1.1 or more.

Claim 5 (Previously Presented): The process for the recovery according to Claim 1, wherein the hydrofluorocarbon compound consists of a compound expressed by a composition formula  $C_nH_mF_{2n-m+2}$  ( $n = 3$  to  $12$ , and  $m = 1$  to  $2n$ ), or a cyclic perfluorocarbon compound with the number of carbon atoms of 12 or less in which fluorine atoms are partially substituted by hydrogen atoms.

Claim 6 (Previously Presented): The process for the recovery according to Claim 1, wherein the oxygenic hydrofluorocarbon compound consists of a compound expressed by a composition formula  $C_nH_mF_{2n-m+2}O$  ( $n = 3$  to  $12$ , and  $m = 1$  to  $2n$ ), or an oxygenic cyclic perfluorocarbon compound with the number of carbon atoms of  $12$  or less in which fluorine atoms are partially substituted by hydrogen atoms.

Claim 7 (Previously Presented): The process for the recovery according to Claim 1, wherein a complexing agent that forms a complex with boron trifluoride in the boron trifluoride complex comprises a polar compound.

Claim 8 (Original): The process for the recovery according to Claim 7, wherein the complexing agent is selected from a group consisting of water, alcohols, ethers, phenols, amines, ketones, aldehydes, esters, acid anhydrides, and acids.

Claim 9 (Previously Presented): The process for the recovery according to Claim 1, wherein the boron trifluoride complex consists of a boron trifluoride-ether complex.

Claim 10 (Previously Presented): The process for the recovery according to Claim 1, wherein the reaction comprising boron trifluoride or its complex as a catalyst is a dimerization reaction, an oligomerization reaction, a condensation reaction, or a polymerization reaction of an olefin.

Claim 11 (Previously Presented): A process for recycling a catalyst recovered from a reaction, the process comprising:

adding the catalyst recovered by the process according to any Claims 1 to 10 to the reaction.

Claim 12 (Previously Presented): A process for the recovery of a catalyst in a reaction comprising boron trifluoride or its complex as a catalyst, the process comprising:  
extracting boron trifluoride or its complex from a reaction product after completion of the reaction,  
wherein an extracting solvent for the extraction consists of a hydrofluorocarbon compound and/or an oxygenic hydrofluorocarbon compound.

Claim 13 (Original): The process for the recovery according to Claim 12, wherein, after boron trifluoride or its complex is extracted from the reaction product, the extract is separated into an extracting solvent and boron trifluoride or its complex by distillation.

Claim 14 (Previously Presented): The process for the recovery according to Claim 12, wherein the extracting solvent consists of a hydrofluorocarbon compound and/or an oxygenic hydrofluorocarbon compound with no ozone-depleting potential.

Claim 15 (Previously Presented): The process for the recovery according to Claim 12, wherein the extracting solvent consists of a hydrofluorocarbon compound and/or an oxygenic hydrofluorocarbon, and a fluorine compound with the specific gravity of 1.1 or more.

Claim 16 (Previously Presented): The process for the recovery according to Claim 12, wherein the hydrofluorocarbon compound consists of a compound expressed by a composition formula  $C_nH_mF_{2n-m+2}$  ( $n = 3$  to  $12$ , and  $m = 1$  to  $2n$ ), or a cyclic perfluorocarbon

compound with the number of carbon atoms of 12 or less in which fluorine atoms are partially substituted by hydrogen atoms.

Claim 17 (Previously Presented): The process for the recovery according to Claim 12, wherein the oxygenic hydrofluorocarbon compound consists of a compound expressed by a composition formula  $C_nH_mF_{2n-m+2}O$  ( $n = 3$  to  $12$ , and  $m = 1$  to  $2n$ ), or an oxygenic cyclic perfluorocarbon compound with the number of carbon atoms of 12 or less in which fluorine atoms are partially substituted by hydrogen atoms.

Claim 18 (Previously Presented): The process for the recovery according to Claim 12, wherein the extracting solvent consists of a hydrofluorocarbon compound having an ether linkage.

Claim 19 (Previously Presented): The process for the recovery according to Claim 12, wherein the complexing agent that forms a complex with boron trifluoride in the boron trifluoride complex comprises a polar compound.

Claim 20 (Original): The process for the recovery according to Claim 19, wherein the complexing agent is selected from a group consisting of water, alcohols, ethers, phenols, amines, ketones, aldehydes, esters, acid anhydrides, and acids.

Claim 21 (Previously Presented): The process for the recovery according to Claim 12, wherein the boron trifluoride complex consists of a boron trifluoride-ether complex.

Claim 22 (Previously Presented): The process for the recovery according to Claim 12, wherein the reaction comprising boron trifluoride or its complex as a catalyst is a

dimerization reaction, an oligomerization reaction, a condensation reaction, or a polymerization reaction of an olefin.

Claim 23 (Currently Amended): A process for recycling a catalyst recovered from a reaction, the process comprising:

adding the catalyst recovered by the process according to any Claims ~~[[11]]~~ 12 to 19 to the reaction.